

What is claimed is:

1. A method for permanently dyeing hair which comprises subjecting said hair to a
5 number of treatments, having a set time interval between each two consecutive
such treatments, wherein each treatment comprises steps a.) and b.) below:

a.) contacting said hair, for a period of about 5 seconds to about 5 minutes
with a recently made mixture of:

10 part ai: oxidative dye intermediates in a shampoo base at alkaline pH; and
wherein part ai optionally has about 0.01 to about 5.0% of a conditioning agent
and optionally has about 0.01 to about 10.0% of a structurant;

part aii: an oxidative compound in a shampoo base at acidic pH and wherein part
aii optionally has about 0.01 to about 5.0% of a conditioning agent; and optionally
has about 0.01 to about 10.0% of a structurant;

with the proviso that at least one of part ai and part aii has about 0.01 to about
5.0% of a conditioning agent; and at least one of part ai and part aii optionally has about
0.01 to about 10.0% of a structurant.

b.) rinsing said mixture from said hair with water;

25 and wherein said number of treatments is between about 2 to about 30; and
wherein said set time interval between each two consecutive treatments is between
about 8 hours and 30 days.

2. A method according to claim 1, wherein said dye intermediate is selected from the group consisting of m-aminophenol, p-phenylene diamine, p-toluenediamine; p-phenylenediamine; 2-chloro-p-phenylenediamine; N-phenyl-p-phenylenediamine; N-2-methoxyethyl-p-phenylenediamine; N,N-bis-(hydroxyethyl)-p-phenylenediamine; 2-hydroxymethyl-p-phenylenediamine; 2-hydroxyethyl-p-phenylenediamine; 4, 4'-diaminodiphenylamine; 2,6-dimethyl-p-phenylenediamine; 2-isopropyl-p-phenylenediamine; N-(2-hydroxypropyl)-p-phenylenediamine; 2-propyl-p-phenylenediamine; 1,3-N, N-bis-(2-hydroxyethyl)-N, N-bis (4-aminophenyl)- 2-propanol; 2-methyl-4-dimethylaminoaniline; p-aminophenol; p- methylaminophenol; 3-methyl-p-aminophenol; 2-hydroxymethyl-p-aminophenol; 2-methyl-p-aminophenol; 2-(2-hydroxyethylaminomethyl)-p-aminophenol; 2-methoxymethyl-p-aminophenol; and 5-aminosalicylic acid; catechol; pyrogallol; o-aminophenol; 2, 4-diaminophenol; 2,4,5-trihydroxytoluene; 1,2,4-trihydroxybenzene; 2-ethylamino-p-cresol; 2,3-dihydroxynaphthalene; 5-methyl-o-aminophenol; 6-methyl-o-aminophenol; and 2-amino-5-acetaminophenol; 2-methyl-1-naphthol; 1-acetoxy-2-methylnaphthalene; 1,7-dihydroxynaphthalene; resorcinol; 4-chlororesorcinol; 1-naphthol; 1,5-dihydroxynaphthalene; 2,7-dihydroxynaphthalene; 2-methylresorcinol; 1-hydroxy-6-aminonaphthalene-3-sulfonic acid; thymol (2-isopropyl-5-methylphenol); 1,5-dihydroxy-1,2, 3,4-tetrahydronaphthalene; 2-chlororesorcinol; 2,3-dihydroxy-1,4-naphthoquinone; and 1-naphthol-4-sulfonic acid; m-phenylenediamine; 2-(2,4-diaminophenoxy)ethanol; N,N-bis(hydroxyethyl)-m-phenylenediamine; 2,6-diaminotoluene; N,N-bis(hydroxyethyl)-2,4-diaminophenetole; bis(2,4-diaminophenoxy)-1,3-propane; 1-hydroxyethyl-2,4-diaminobenzene; 2-amino-4-hydroxyethylaminoanisole; aminoethoxy-2,4-diaminobenzene; 2,4-diaminophenoxyacetic acid; 4,6-bis(hydroxyethoxy)-m-phenylenediamine; 2,4-diamino-5-methylphenetole; 2,4-diamino-5-hydroxyethoxytoluene; 2,4-dimethoxy-1,3-diaminobenzene; and 2,6-bis(hydroxyethylamino)toluene; m-aminophenol; 2-hydroxy-4-carbamoylmethylaminotoluene; m-carbamoylmethylaminophenol; 6-hydroxybenzomorpholine; 2-hydroxy-4-aminotoluene; 2-hydroxy-4-

hydroxyethylaminotoluene; 4,6-dichloro-m-aminophenol; 2-methyl-m-aminophenol; 2-chloro-6-methyl-m-aminophenol; 2-hydroxyethoxy-5-aminophenol; 2-chloro-5-trifluoroethylaminophenol; 4-chloro-6-methyl-m-aminophenol; N-cyclopentyl-3-aminophenol; N-hydroxyethyl-4-methoxy-2-methyl-m-aminophenol and 5-amino-4-methoxy-2-methylpheno; 2-dimethylamino-5-aminopyridine; 2,4,5,6-tetra-aminopyrimidine; 4,5-diamino-1-methylpyrazole; 1-phenyl-3-methyl-5-pyrazolone; 6-methoxy-8-aminoquinoline; 2,6-dihydroxy-4-methylpyridine; 5-hydroxy-1,4-benzodioxane; 3,4-methylenedioxyphenol; 4-hydroxyethylamino-1,2-methylenedioxybenzene; 2,6-dihydroxy-3,4-dimethylpyridine; 5-chloro-2,3-dihydroxypyridine; 3,5-diamino-2,6-dimethoxypyridine; 2-hydroxyethylamino-6-methoxy-3-aminopyridine; 3,4-methylenedioxyaniline; 2,6-bis-hydroxyethoxy-3,5-diaminopyridine; 4-hydroxyindole; 3-amino-5-hydroxy-2,6-dimethoxypyridine; 5,6-dihydroxyindole; 7-hydroxyindole; 5-hydroxyindole; 2-bromo-4,5-methylenedioxyphenol; 6-hydroxyindole; 3-amino-2-methylamino-6-methoxypyridine; 2-amino-3-hydroxypyridine; 2,6-diaminopyridine; 5-(3,5-diamino-2-pyridyloxy)-1,3-dihydropentane; 3-(3,5-diamino-2-pyridyloxy)-2-hydroxypropanol and 4-hydroxy-2,5,6-triaminopyrimidine, or combinations thereof.

3. A method according to claim 1, wherein said part ai prior to mixture with said part aii, has a pH of about 8 to about 11.

4. A method according to claim 1, wherein said part aii, prior to mixture with said part ai has a pH of about 3 to about 4.

5. A method according to claim 1 wherein said alkaline composition part ai comprises from:
 - a) about 0.1 to about 99.9% of an aqueous shampoo base, wherein the shampoo or cleansing or surfactant agent within said shampoo base comprises from about 10 to about 50% of the total composition;
 - b) about 0.1 to about 5% of oxidative hair dyes;
 - c) about 0.1 to about 5% of a coupling compound; and optionally has about 0.01 to about 5.0% of a conditioning agent, more preferably about 1.0% to about 4.0% of a conditioning agent; and optionally has about 1.0% to about 10.0% of a structurant.
6. A method according to claim 1 wherein part aii comprises:
 - a. about 1 to about 99 % of a shampoo base agent comprising about 10 to about 50% of a shampooing agent; and
 - b. about 2% to about 5% of an oxidizing compound; and optionally has about 0.01 to about 5.0% of a conditioning agent, more preferably about 1.0% to about 4.0% of a conditioning agent; and optionally has about 1.0 to about 10.0% of a structurant.
7. A method according to claim 1 wherein said period for contacting said hair is between about 1/2 minute and about 2 minutes.
8. A method according to claim 1 wherein said set time interval is between about 1 day and about 3 days.

9. A method according to claim 1 wherein said hair is highlighted.
10. A method according to claim 1 wherein said hair has a yield stress index in the
range of about 200 to 1500.
11. A method according to claim 1 wherein said hair has a yield stress index in the
range of about 400 to 1500.
12. A method according to claim 1 wherein said hair has a yield stress index in the
range of about 800 to 1500.
13. A method according to claim 1 wherein said hair has a combing index in the
range of about 1.1 to about 4.0.
14. A method according to claim 1 wherein said hair has a combing index in the
range of about 1.2 to about 3.5.
15. A method according to claim 1 wherein said hair has a combing index in the
range of about 1.5 to about 3.0.
16. A method according to claim 1 wherein said method minimizes hair outgrowth.

17. A method according to claim 1 wherein said hair has a combing force of about 5 to about 55 gmforce.

5 18. A method according to claim 1 wherein said hair has a combing force of about 10 to about 20 gmforce.

10 19. A method according to claim 1 wherein said hair has a combing force of about 10 to about 16 gmforce.

20. A method according to claim 1 wherein said method minimizes hair color fading.

5 21. A method according to claim 1 wherein said hair minimize root outgrowth

20 22. A method according to claim 1 wherein said mixture of part ai and part aii delivers delta E of about 0.1 to about 65 on blonde hair and delta E of about 0.1 to about 8 on brown hair.

25 23. A method according to claim 1 wherein said method delivers to said hair a ratio IR absorption at 1040/1240 of about 0.01 to 1.5.

30 24. A method according to claim 1 wherein said method delivers to said hair a ratio IR absorption at 1040/1240 of about 0.01 to 1.0.

25. A method according to claim 1 wherein said method delivers to said hair a ratio IR absorption at 1040/1240 of about 0.01 to 0.5.
- 5 26. A method according to claim 1 wherein said oxidative compound is selected from the group consisting of hydrogen peroxide, urea peroxide, melamine peroxide, sodium perborate, sodium percarbonate, and mixtures thereof.
- 10 27. A method according to claim 1 wherein part ai comprises from about 35% to about 98.9% water.
28. A method according to claim 1, wherein the mixture of part ai and part aii has a neat viscosity of from about 500 cps to about 60,000 cps at 26.7.degree. C., as measured by a Brookfield RVTDCP with a spindle CP-41 at 1RPM for 3 minutes.
29. A method in accordance with claim 1, wherein said hair has a break stress of about 0.005 to about 0.03 gmforce/micron.
30. A method in accordance with claim 1, wherein said hair has a break stress of about 0.005 to about 0.025 gmforce/micron.
- 25 31. A method in accordance with claim 1, wherein said hair has a break stress of about 0.005 to about 0.018 gmforce/micron.
- 30

32. A method for maintaining hair color through the use of a permanent hair dye which comprises subjecting said hair to successive treatments, having a set time interval between each two consecutive such treatments, wherein each treatment comprises steps a.) and b.) below:

a.) contacting said hair, for a period of about 5 seconds to about 5 minutes with a recently made mixture of:

part ai: oxidative dye intermediates in a shampoo base at alkaline pH and wherein part ai optionally has about 0.01 to about 5.0% of a conditioning agent; and wherein part aii optionally has about 0.01 to about 10.0% of a structurant;

part aii: An oxidative compound in a shampoo base at acidic pH and wherein part aii optionally has about 0.01 to about 5.0% of a conditioning agent;

with the proviso that at least one of part ai and part aii has about 0.01 to about 5.0% of a conditioning agent; and wherein at least one part ai and part aii optionally has about 0.01 to about 10.0% of a structurant .

b.) rinsing said mixture from said hair with water;

and wherein said number of treatments is at least about 2; and wherein said set time interval between each two consecutive treatments is between about 8 hours and 30 days.

33. A method according to claim 1 wherein said oxidative hair colorant is present at about 0.1% to about 1%.

34. A method according to claim 1 wherein said oxidative dye intermediates are present at about 2 % to about 5 %.

35. A dispenser for dispensing simultaneously part ai and part aii according to claim 1, which comprises:

- A.) a means for holding part ai and part aii in physically separate locations;
- B.) a means for protecting part ai and part aii from air prior to dispensing;
- C.) a means for dispensing part ai and part aii in equal amounts and in proximity to each other.

36. A method according to claim 1 wherein part ai and part aii are mixed by hand.

37. A method according to claim 1 which comprises rinsing said mixture of part ai and part aii from said hair with water in a shower.

38. A composition for permanently dying hair which comprises a mixture of part ai comprising about 0.1% to about 99.9% of a shampoo base pH and wherein part aii optionally has about 0.01 to about 5.0% of a conditioning agent; and part ai optionally has about 0.01 to about 5.0% of a structurant;

- a) about 0.1% to about 1% of a dye; and
- b) about 1% to about 4% of a volatile silicone;

part aii comprises

about 1 to about 99% of a shampoo base pH and wherein part aii optionally has about 0.01 to about 5.0% of a conditioning agent; and wherein part aii optionally has about 0.01 to about 10.0% of a structurant .

a) about 1 to about 5% of an oxidative compound;
with the proviso that at least one of part ai and part aii has about 0.01 to about 5.0% of a conditioning agent; and at least one of part ai and part aii has about 0.01 to about 10.0% of a structurant.

39. A composition according to claim 35, wherein said shampoo agent comprises a surfactants selected from the group consisting of amphoteric surfactants, anionic surfactants, zwitterionic surfactants, and mixtures thereof.
40. A composition according to claim 35, wherein said structurant is selected from the group consisting of lauryl alcohol, oleyl alcohol, myristyl alcohol, stearyl alcohol, and the like, and mixtures.